

ROCK UNITS

SEDIMENTARY, VOLCANIC, METASEDIMENTARY, AND METAVOLCANIC ROCKS (Venseer of Pleistocene glacial deposits and Holocene deposits not mapped.)

- Triassic**
 - Tu** Undifferentiated, covered sedimentary rocks and basalts; may include rocks of the Talcott Formation and the New Haven Arkose, and younger Triassic rocks. *Tu*, exposed basalts.
 - Tt** Talcott Formation. Sedimentary rocks and basalts; six members tentatively identified.
 - t₆*, arkosic conglomerates, sandstones, and siltstones; some carbonates.
 - t₅*, pillowed and brecciated basalt.
 - t₄*, pale reddish-brown and grayish-olive shale.
 - t₃*, very dark gray columnar basalt, massive, medium-grained central portion.
 - t₂*, pale reddish-brown to moderate reddish-orange arkosic sandstone and conglomerate; thin bluish-gray to grayish-red shale at the base.
 - t₁*, thin amygdaloidal basalt; weathers to light brown vesicular and angular chips.

- Devonian**
 - Trh** New Haven Arkose. Pale reddish-brown to moderate reddish-orange shale siltstones, arkosic sandstones, and arkosic conglomerates; the base is not exposed.

- Siluro-Devonian**
 - ts** Straits Schist. Lustrous, muscovite coated foliation surfaces with quartz segregations, rusty weathering, homogeneous lithology, massive bedding. Medium- to coarse-grained quartz + muscovite + biotite + plagioclase + garnet + graphite ± sillimanite ± kyanite schist.

- Paleozoic**
 - Discontinuous lenses of amphibolite (a), quartzite (q), marble (m), and calc-silicate (cs) along the boundary between the Straits Schist and the Collinsville Formation.**

- Unconformity between the Straits Schist or discontinuous lenses and the Collinsville Formation**

- Collinsville Formation.** Aluminous member (ca) is heterogeneous; medium-grained nonrusty-weathering quartz + muscovite + biotite + plagioclase + garnet ± staurolite ± kyanite ± sillimanite schist and schistose gneiss, medium- to coarse-grained quartz + plagioclase + biotite + garnet + kyanite + muscovite gneiss, and muscovite + quartz + biotite + plagioclase schist. Muscovite/biotite > 1. Bristol Member (cb) is a uniform, nonrusty-weathering, medium-grained quartz + biotite + muscovite ± garnet gneiss to schistose gneiss. Transitional member (cb-ca) contains all the above rocks of the Collinsville Formation.

- Harland Unit I.** Laminated member (hl) is a nonrusty-weathering, laminated, fine-grained quartz + biotite + plagioclase + muscovite schistose gneiss. The banded member (hlb) is a nonrusty-weathering, banded, fine- to medium-grained quartz + biotite + plagioclase + muscovite ± kyanite schistose gneiss. The kyanite-rich member (hik) is a partly rusty-weathering, fine-grained, knobby surfaced biotite + quartz + muscovite + kyanite ± sillimanite massive schist to schistose gneiss. The quartz-rich member (hli) contains light-gray quartzite and quartz-rich gneiss.

- Harland Unit II.** Waterbury Formation.

- The garnetiferous member of Harland Unit II (hli) is an extremely heterogeneous suite of well foliated, lustrous nonrusty-weathering medium-grained to coarse-grained quartz + biotite + plagioclase + muscovite ± staurolite ± garnet ± kyanite schist to schistose gneiss, biotite + plagioclase + quartz + garnet schist. Coarse porphyroblasts of garnet, kyanite, staurolite, biotite, and magnetite are common. The quartz-rich member (hli) is medium-grained quartz + plagioclase + biotite + garnet gneiss.**

- The Waterbury Formation (w) is a rusty-weathering, fine-grained, contorted, massive, patchy to fully textured biotite + quartz + kyanite + plagioclase ± muscovite ± microcline + garnet schist to schistose gneiss.**

- PALEOZOIC PLUTONIC ROCKS**

- Syenite stock: microcline + arfvedsonite + apatite + biotite + rutile + sphene + calcite.**

- Lamprophyre: minute biotite + augite + orthoclase + apatite + sphene + calcite.**

- Granodiorites or granodioritic gneisses that are rich in plagioclase and biotite and have little or no microcline or muscovite.**
- Pegmatites**
- Quartz + albite + microcline or orthoclase + muscovite. Rare tourmaline and beryl accessories. Some pegmatites are relatively undeformed. Highly deformed pegmatites may have intruded during early Acadian deformation.**
- Granites and granitic gneisses that vary from microcline-rich and muscovite-rich plutons to biotite-rich plutons. Nonporphyritic. Some granites are relatively undeformed. Highly deformed granites may have intruded during early Acadian deformation.**

- Newtown Gneiss, granitic (n) to granodioritic (nm) gneiss characterized by large subhedral to subcubic microcline porphyroblasts.**

- Some amphibolites may have been sills but no evidence to support a distinction between intrusive and extrusive mafic bodies exists.**
- Possible Taconic plutonic events but there is no evidence to support this possibility.**

- Ultramafic body**
- Phlogopite + chlorite + serpentine + talc.**

- Miscellaneous Rocks**
- amphibolite**
- marble**
- quartzite**
- calc-silicate**
- K-feldspar porphyroblasts outside of limit of Newtown Gneiss.**

- Where extent of outcrop is small, only letter symbols are used: p (pegmatite), g (granite) cs (calc-silicate), gs (graphitic schist), a (amphibolite).**

- SYMBOLS**

- OUTCROPS**
- Single outcrop or closely spaced outcrop.

- Contact
- Long dashed where approximately located; short dashed where gradual or inferred.

- Boundary of area containing abundant granitic rocks

- Fault, approximately located, showing dip where locally exposed. U, upthrown side; D, downthrown side, short dashed where inferred.

- Strike and dip of beds
- Inclined Vertical Horizontal
- Strike and dip of foliation and parallel bedding
- Strike and dip of foliation

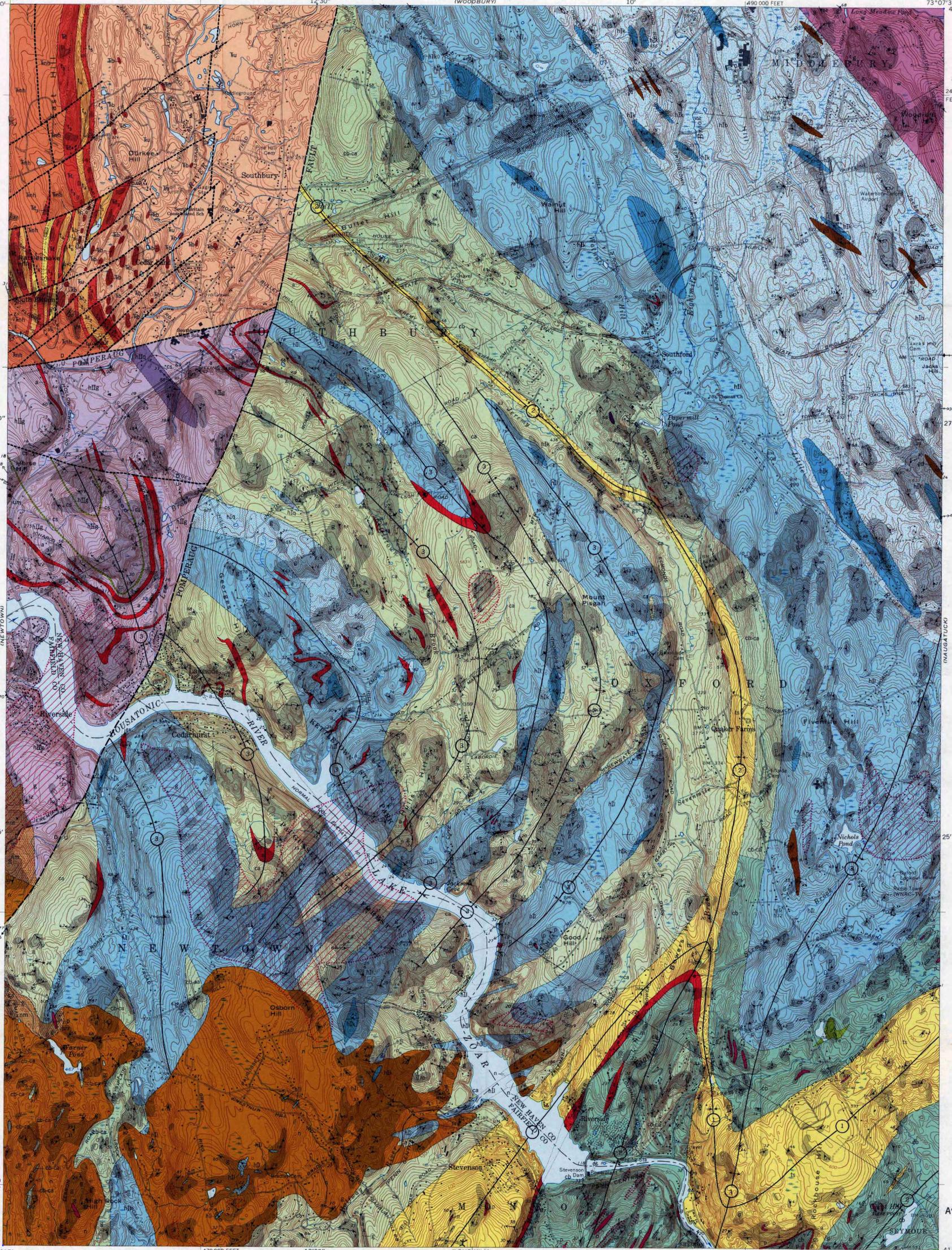
- Inclined Vertical
- Strike and dip of axial plane of fold
- Anticline
- Syncline

- Showing trace of axial plane.
- No attempt is made to define the degree of rotation from an original position; only the stratigraphic fold relationship is indicated. Circled number refers to generation of fold, explained in text.

- LINEAR FEATURES**
- Combined symbols show similar attitude of more than one linear feature

- Bearing and plunge of symmetrical fold axis
- Bearing and plunge of fold axis with clockwise asymmetry.
- Bearing and plunge of fold axis with counter-clockwise asymmetry.
- Bearing and plunge of late stage fold axis.
- Bearing and plunge of crinkle axis.
- Bearing and plunge of mineral lineation.

- ECONOMIC FEATURES**
- Dry hole
- Abandoned mine, pit, or quarry.
- Sand and gravel pit.
- Mineralized zone



BEDROCK GEOLOGY OF THE SOUTHBURY QUADRANGLE, CONNECTICUT

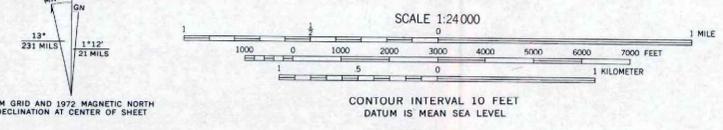
By Robert B. Scott, 1967-1969 Assisted by William Raymond

Base map by U.S. Geological Survey, Control by USGS, USC&GS, and Connecticut Geodetic Survey.

Topography from aerial photographs by multiplex methods. Aerial photographs taken 1950. Field check 1953.

Revisions from aerial photographs taken 1972.

Polyconic projection. 1927 North American datum 10,000-foot grid based on Connecticut coordinate system



UTM GRID AND 1973 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL